

**Work Order ID 53125**

Page 1

October 22, 2009 4:23:24 PM

Item ID: D2893-1

Accept



Setup Start



Revision ID: B

Stop



Item Name: 2.75 Support

Start Date: 23/11/2009 Set Qty: 20.00



Cust Item ID:

Required Date: 23/11/2009 Req'd Qty: 20.00



Customer:

Reference:

Approvals: Process Plan: *RP*Date: *09/10/22*

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Draw<br>Number | Draw<br>Rev. | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|----------------|--------------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|----------------|--------------|--------------|---------------|---------------|------------------|----------------|

| Draw Nbr | Revision Nbr |
|----------|--------------|
| D2893    | Rev B        |

100 0.00



HAAS CNC VERTICAL MACHINING #1

|        |      |      |                        |              |
|--------|------|------|------------------------|--------------|
| HAAS 1 | Memo | 0.00 | <i>SL/mw= 09/11/08</i> | <i>19 01</i> |
|--------|------|------|------------------------|--------------|

HAAS CNC vertical machine #1

110 0.00



QC2- Inspect parts off machine FAI/FAIB

|    |      |      |                        |              |
|----|------|------|------------------------|--------------|
| QC | Memo | 0.00 | <i>SL/mw= 09/11/08</i> | <i>19 01</i> |
|----|------|------|------------------------|--------------|

Quality Control

120 0.00



QC8- Inspect parts - second check

|    |      |      |                    |             |
|----|------|------|--------------------|-------------|
| QC | Memo | 0.00 | <i>SL 09/11/09</i> | <i>19 0</i> |
|----|------|------|--------------------|-------------|

Quality Control

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: D2893-1 PAR #: Fault Category: Machined parts NCR: Yes No DQA: Date: 05/11/30  
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: Date: 05/11/30

| NCR: 53125 |      | WORK ORDER NON-CONFORMANCE (NCR)  |                                 |   |                |                           |                                 |                          |
|------------|------|---|---------------------------------|---|----------------|---------------------------|---------------------------------|--------------------------|
| DATE       | STEP | Description of NC<br>Section A  | Corrective Action Section B     |   |                | Verification<br>Section C | Approval<br>Chief Eng           | Approval<br>QC Inspector |
|            |      |   | Initial<br>Chief Eng            | Action Description<br>Chief Eng   | Sign &<br>Date |                           |                                 |                          |
| 05/11/06   | 100  | 1 part 2893-1 stool pulled out of holder while machining, causing deep grooves in part 2nd half | CP<br>05.11.06<br>per<br>DS1042 | - thickness of affected area<br>~0.100". Acceptable<br>- 2nd part scrap. (No replace) | JL<br>09/11/06 | OK<br>09/11/09            | CP<br>05.11.06<br>per<br>DS1042 | 05-10-05                 |
|            |      | has only minor grooves, is part acceptable?<br>R.C: process                                     | J<br>DS1042                     |   |                |                           |                                 |                          |
|            |      |   |                                 |   |                |                           |                                 |                          |
|            |      |   |                                 |   |                |                           |                                 |                          |

NOTE: Date &amp; initial all entries

**Work Order ID 53125**

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Item ID: D2893-1

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Setup Start



Revision ID: B

Stop



Item Name: 2.75 Support

Start Date: 23/11/2009 Start Qty: 20.00



Cust Item ID:

Required Date: 23/11/2009 Req'd Qty: 20.00



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

130



White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

=&gt; 11/09/11

Powdercoat

Powder Coating

Memo

0.00

Mask Inside Bore for Priming  START TIME:  
7:00AM  OVEN TEMPERATURE: 730  FINISH  
TIME: 400°F

140



QC3- Inspect Part Finish

0.00

QC

Quality Control

Memo

0.00

150



SprayPaint

0.00

SprayPaint

Spray Painting

Memo

0.00

Prime inside surface as per Dwg D2893 and QSI 005 4.3

**Work Order ID 53125**

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Item ID: D2893-1

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Setup Start



Revision ID: B

Stop



Item Name: 2.75 Support

Start Date: 23/11/2009 Start Qty: 20.00



Cust Item ID:

Required Date: 23/11/2009 Req'd Qty: 20.00



Customer:

**Reference:**

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

**Sequence ID/  
Work Center ID****Operation  
Description****Set Up/  
Run Hours****Draw  
Number****Draw  
Rev.****Plan  
Code****Accept  
Qty****Reject  
Qty****Reject  
Number****Insp.  
Stamp**

160

QC14- Inspect Spray Paint

0.00



QC

Quality Control

ZT 09-11-24



170

Identify as per dwg &amp; Stock Location:

X-tube  
Ready

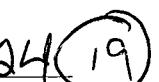
0.00



Packaging

Packaging

ML 09-11-24



180

QC21- Final Inspection - Work Order Release

0.00



QC

Quality Control

09/11/25 AF

MF 09-11-24

**Picklist Print**

Page 1

October 22, 2009 4:23:29 PM

Work Order ID: 53125



Parent Item: D2893-1RevB



Parent Item Name: 2.75 Support

Start Date: 23/11/2009

Required Date: 23/11/2009

Comments:

Start Qty: 20.00

Required Qty: 20.00

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Remaining<br>Qty To Pick | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|--------------------------|---------------|----------------|--------|
| DSK078RevA                      |                        | Manufactured  | No          |                     |                  | 100             | Each               | 25.0000        | 10.0000                  |               |                |        |

D2893-1 TURNING DETAIL

| <u>Warehouse</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|------------------|----------------|-----------------|
|------------------|----------------|-----------------|

Location

Main Warehouse

|       |    |  |
|-------|----|--|
| MAT   | 25 |  |
| 47395 | 5  |  |
| 47975 | 10 |  |
| 51879 | 10 |  |

10 JK 09/11/05

|                             |              |             |
|-----------------------------|--------------|-------------|
| DART AEROSPACE LTD          | Work Order:  | 53125       |
| Description: Ø2.750 Support | Part Number: | D2893-1     |
| Inspection Dwg: D2893       | Rev: B       | Page 1 of 1 |

### FIRST ARTICLE INSPECTION DIMENSION SHEET

First Article  Prototype

| Dim                  | Min   | Max   | Go/No Go Gauge | Record Actual Dimensions |       |       |       |       |
|----------------------|-------|-------|----------------|--------------------------|-------|-------|-------|-------|
|                      |       |       |                | 1                        | 2     | 3     | 4     | 5     |
| <b>HAAS Section</b>  |       |       |                |                          |       |       |       |       |
| AA                   | 2.985 | 3.005 |                | 2.987                    | 2.986 | 2.994 | 2.994 | 2.994 |
| AB                   | 0.440 | 0.460 |                | .440                     | .440  | .440  | .440  | .440  |
| AC                   | 0.125 | 0.160 |                | .143                     | .143  | .146  | .143  | .143  |
| AD                   | 0.040 | 0.060 |                | .049                     | .049  | .049  | .050  | .050  |
| AE                   | 0.188 | 0.193 |                | .189                     | .189  | .189  | .189  | .189  |
| AF                   | 0.125 | 0.160 |                | .142                     | .142  | .142  | .140  | .141  |
| AG                   | 0.140 | 0.160 |                | .156                     | .155  | .156  | .154  | .156  |
| AH                   | 1.360 | 1.400 |                | 1.366                    | 1.366 | 1.371 | 1.372 | 1.368 |
| AI                   | 0.040 | 0.060 |                | .053                     | .047  | .056  | .047  | .049  |
| AJ                   | 1.190 | 1.230 |                | 1.208                    | 1.208 | 1.209 | 1.209 | 1.208 |
| AK                   | 0.010 | 0.020 |                | .010                     | .010  | .010  | .010  | .010  |
| AL                   | 0.053 | 0.073 |                | .063                     | .063  | .063  | .063  | .063  |
| AM                   | 0.240 | 0.260 |                | .250                     | .250  | .250  | .250  | .250  |
| AN                   | 2.518 | 2.538 |                | 2.522                    | 2.523 | 2.523 | 2.521 | 2.525 |
| AO                   | 84.39 | 90.39 |                | 87.39                    | 87.39 | 87.39 | 87.39 | 87.39 |
| AP                   | 0.261 | 0.266 |                | .261                     | .261  | .262  | .262  | .262  |
| AQ                   | 0.053 | 0.073 |                | .063                     | .063  | .063  | .063  | .063  |
| AR                   |       |       |                |                          |       |       |       |       |
| AS                   |       |       |                |                          |       |       |       |       |
| AT                   |       |       |                |                          |       |       |       |       |
| <b>Accept/Reject</b> |       |       |                |                          |       |       |       |       |

Measured by: JL Date: 09/11/06

Audited by: CM Date: 09/11/09

Prototype Approval: \_\_\_\_\_ Date: \_\_\_\_\_

| Rev | Date     | Change               | Revised by       | Approved  |
|-----|----------|----------------------|------------------|-----------|
| A   | 02.12.13 | New Issue            | KJ/RF            |           |
| B   | 07.05.08 | Dimension AP revised | KJ/JLM           |           |
| C   | 08.04.21 | Reformat             | KJ/JLM <u>JL</u> | <u>JL</u> |

N 520

|                             |              |             |
|-----------------------------|--------------|-------------|
| DART AEROSPACE LTD          | Work Order:  | S3125       |
| Description: Ø2.750 Support | Part Number: | D2893-1     |
| Inspection Dwg: D2893       | Rev: B       | Page 1 of 1 |

### FIRST ARTICLE INSPECTION DIMENSION SHEET

First Article  Prototype

| Dim                  | Min   | Max   | Go/No Go Gauge | Record Actual Dimensions |       |       |       |       |
|----------------------|-------|-------|----------------|--------------------------|-------|-------|-------|-------|
|                      |       |       |                | 6                        | 7     | 8     | 9     | 10    |
| <b>HAAS Section</b>  |       |       |                |                          |       |       |       |       |
| AA                   | 2.985 | 3.005 |                | 2.996                    | 2.997 | 2.997 | 2.995 | 2.991 |
| AB                   | 0.440 | 0.460 |                | .440                     | .440  | .440  | .440  | .440  |
| AC                   | 0.125 | 0.160 |                | .140                     | .141  | .142  | .140  | .140  |
| AD                   | 0.040 | 0.060 |                | .050                     | .050  | .052  | .049  | .049  |
| AE                   | 0.188 | 0.193 |                | .191                     | .191  | .193  | .192  | .191  |
| AF                   | 0.125 | 0.160 |                | .137                     | .140  | .140  | .140  | .140  |
| AG                   | 0.140 | 0.160 |                | .151                     | .150  | .151  | .152  | .153  |
| AH                   | 1.360 | 1.400 |                | 1.373                    | 1.375 | 1.377 | 1.373 | 1.375 |
| AI                   | 0.040 | 0.060 |                | .050                     | .053  | .052  | .051  | .050  |
| AJ                   | 1.190 | 1.230 |                | 1.211                    | 1.210 | 1.219 | 1.215 | 1.216 |
| AK                   | 0.010 | 0.020 |                | .015                     | .015  | .015  | .015  | .015  |
| AL                   | 0.053 | 0.073 |                | .063                     | .063  | .063  | .063  | .063  |
| AM                   | 0.240 | 0.260 |                | .250                     | .250  | .250  | .250  | .250  |
| AN                   | 2.518 | 2.538 |                | 2.523                    | 2.530 | 2.533 | 2.535 | 2.537 |
| AO                   | 84.39 | 90.39 |                | 87.21                    | 87.39 | 87.39 | 87.39 | 87.39 |
| AP                   | 0.261 | 0.266 |                | .263                     | .265  | .265  | .264  | .264  |
| AQ                   | 0.053 | 0.073 |                | .063                     | .063  | .063  | .063  | .063  |
| AR                   |       |       |                |                          |       |       |       |       |
| AS                   |       |       |                |                          |       |       |       |       |
| AT                   |       |       |                |                          |       |       |       |       |
| <b>Accept/Reject</b> |       |       |                |                          |       |       |       |       |

Measured by: MJF Date: 09/11/08

Audited by: CMK Date: 09/11/09

Prototype Approval: \_\_\_\_\_ Date: \_\_\_\_\_

| Rev | Date     | Change               | Revised by | Approved  |
|-----|----------|----------------------|------------|-----------|
| A   | 02.12.13 | New Issue            | KJ/RF      |           |
| B   | 07.05.08 | Dimension AP revised | KJ/JLM     |           |
| C   | 08.04.21 | Reformat             | KJ/JLM     | <u>JL</u> |

|                             |              |             |
|-----------------------------|--------------|-------------|
| DART AEROSPACE LTD          | Work Order:  | 53125       |
| Description: Ø2.750 Support | Part Number: | D2893-1     |
| Inspection Dwg: D2893       | Rev: B       | Page 1 of 1 |

### FIRST ARTICLE INSPECTION DIMENSION SHEET

First Article  Prototype

| Dim                  | Min   | Max   | Go/No Go Gauge | Record Actual Dimensions |       |       |       |       |
|----------------------|-------|-------|----------------|--------------------------|-------|-------|-------|-------|
|                      |       |       |                | 11                       | 12    | 13    | 14    | 15    |
| <b>HAAS Section</b>  |       |       |                |                          |       |       |       |       |
| AA                   | 2.985 | 3.005 |                | 2.994                    | 2.993 | 2.995 | 2.995 | 2.994 |
| AB                   | 0.440 | 0.460 |                | .440                     | .440  | .440  | .440  | .440  |
| AC                   | 0.125 | 0.160 |                | .142                     | .139  | .140  | .141  | .140  |
| AD                   | 0.040 | 0.060 |                | .051                     | .051  | .052  | .050  | .054  |
| AE                   | 0.188 | 0.193 |                | .191                     | .191  | .191  | .191  | .191  |
| AF                   | 0.125 | 0.160 |                | .141                     | .140  | .136  | .138  | .140  |
| AG                   | 0.140 | 0.160 |                | .153                     | .151  | .152  | .153  | .152  |
| AH                   | 1.360 | 1.400 |                | 1.372                    | 1.379 | 1.372 | 1.373 | 1.372 |
| AI                   | 0.040 | 0.060 |                | .053                     | .053  | .053  | .052  | .050  |
| AJ                   | 1.190 | 1.230 |                | 1.217                    | 1.210 | 1.215 | 1.217 | 1.213 |
| AK                   | 0.010 | 0.020 |                | .015                     | .015  | .015  | .015  | .015  |
| AL                   | 0.053 | 0.073 |                | .063                     | .063  | .063  | .063  | .063  |
| AM                   | 0.240 | 0.260 |                | .250                     | .250  | .250  | .250  | .250  |
| AN                   | 2.518 | 2.538 |                | 2.526                    | 2.526 | 2.528 | 2.526 | 2.528 |
| AO                   | 84.39 | 90.39 | 87.388         | 87.391                   | 87.39 | 87.39 | 87.39 | 87.39 |
| AP                   | 0.261 | 0.266 |                | .265                     | .265  | .265  | .265  | .264  |
| AQ                   | 0.053 | 0.073 |                | .063                     | .063  | .063  | .063  | .063  |
| AR                   |       |       |                |                          |       |       |       |       |
| AS                   |       |       |                |                          |       |       |       |       |
| AT                   |       |       |                |                          |       |       |       |       |
| <b>Accept/Reject</b> |       |       |                |                          |       |       |       |       |

Measured by: MMF Date: 09/11/08

Audited by: QML Date: 09/11/08

Prototype Approval: \_\_\_\_\_ Date: \_\_\_\_\_

| Rev | Date     | Change               | Revised by       | Approved  |
|-----|----------|----------------------|------------------|-----------|
| A   | 02.12.13 | New Issue            | KJ/RF            |           |
| B   | 07.05.08 | Dimension AP revised | KJ/JLM           |           |
| C   | 08.04.21 | Reformat             | KJ/JLM <u>JL</u> | <u>JL</u> |

|                             |              |             |
|-----------------------------|--------------|-------------|
| DART AEROSPACE LTD          | Work Order:  | 53125       |
| Description: Ø2.750 Support | Part Number: | D2893-1     |
| Inspection Dwg: D2893       | Rev: B       | Page 1 of 1 |

### FIRST ARTICLE INSPECTION DIMENSION SHEET

First Article  Prototype

| Dim                  | Min   | Max   | Go/No Go Gauge | Record Actual Dimensions |       |       |       |    |
|----------------------|-------|-------|----------------|--------------------------|-------|-------|-------|----|
|                      |       |       |                | 16                       | 17    | 18    | 19    | 20 |
| <b>HAAS Section</b>  |       |       |                |                          |       |       |       |    |
| AA                   | 2.985 | 3.005 |                | 2.992                    | 2.994 | 2.996 | 2.994 |    |
| AB                   | 0.440 | 0.460 |                | .440                     | .440  | .440  | .440  |    |
| AC                   | 0.125 | 0.160 |                | .140                     | .138  | .140  | .141  |    |
| AD                   | 0.040 | 0.060 |                | .051                     | .050  | .050  | .051  |    |
| AE                   | 0.188 | 0.193 |                | .191                     | .191  | .191  | .191  |    |
| AF                   | 0.125 | 0.160 |                | .140                     | .138  | .138  | .140  |    |
| AG                   | 0.140 | 0.160 |                | .152                     | .150  | .151  | .151  |    |
| AH                   | 1.360 | 1.400 |                | 1.372                    | 1.376 | 1.372 | 1.375 |    |
| AI                   | 0.040 | 0.060 |                | .054                     | .054  | .053  | .053  |    |
| AJ                   | 1.190 | 1.230 |                | 1.217                    | 1.222 | 1.217 | 1.218 |    |
| AK                   | 0.010 | 0.020 |                | .015                     | .015  | .015  | .015  |    |
| AL                   | 0.053 | 0.073 |                | .063                     | .063  | .063  | .063  |    |
| AM                   | 0.240 | 0.260 |                | .250                     | .250  | .250  | .250  |    |
| AN                   | 2.518 | 2.538 |                | 2.532                    | 2.537 | 2.538 | 2.538 |    |
| AO                   | 84.39 | 90.39 |                | 87.39                    | 87.39 | 87.39 | 87.39 |    |
| AP                   | 0.261 | 0.266 |                | .265                     | .263  | .264  | .263  |    |
| AQ                   | 0.053 | 0.073 |                | .063                     | .063  | .063  | .063  |    |
| AR                   |       |       |                |                          |       |       |       |    |
| AS                   |       |       |                |                          |       |       |       |    |
| AT                   |       |       |                |                          |       |       |       |    |
| <b>Accept/Reject</b> |       |       |                |                          |       |       |       |    |

Measured by: *MNF* Date: 09/11/08

Audited by: *DRF* Date: 09/11/09

Prototype Approval: \_\_\_\_\_ Date: \_\_\_\_\_

| Rev | Date     | Change               | Revised by | Approved   |
|-----|----------|----------------------|------------|------------|
| A   | 02.12.13 | New Issue            | KJ/RF      |            |
| B   | 07.05.08 | Dimension AP revised | KJ/JLM     |            |
| C   | 08.04.21 | Reformat             | KJ/JLM     | <i>JLM</i> |

SHOP COPY

RETURN TO

ENGINEERING

UNCONTROLLED COPY

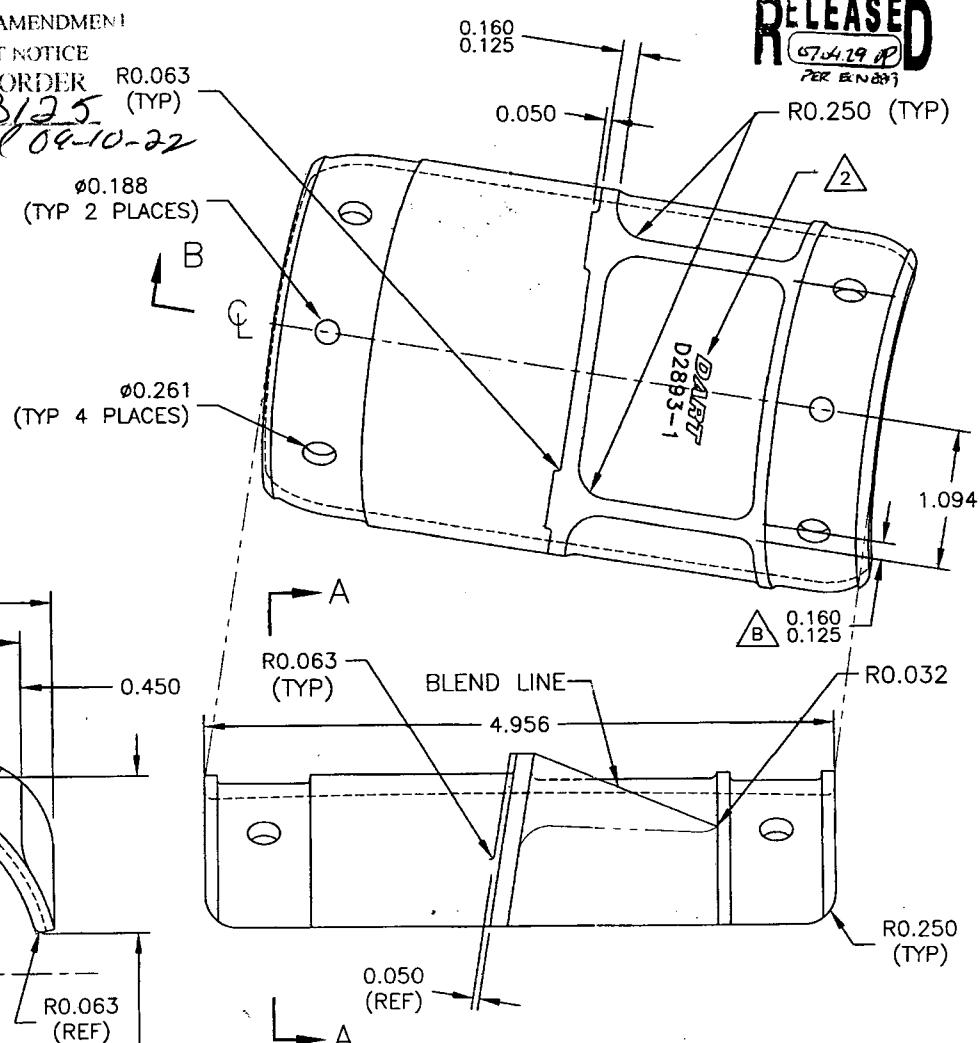
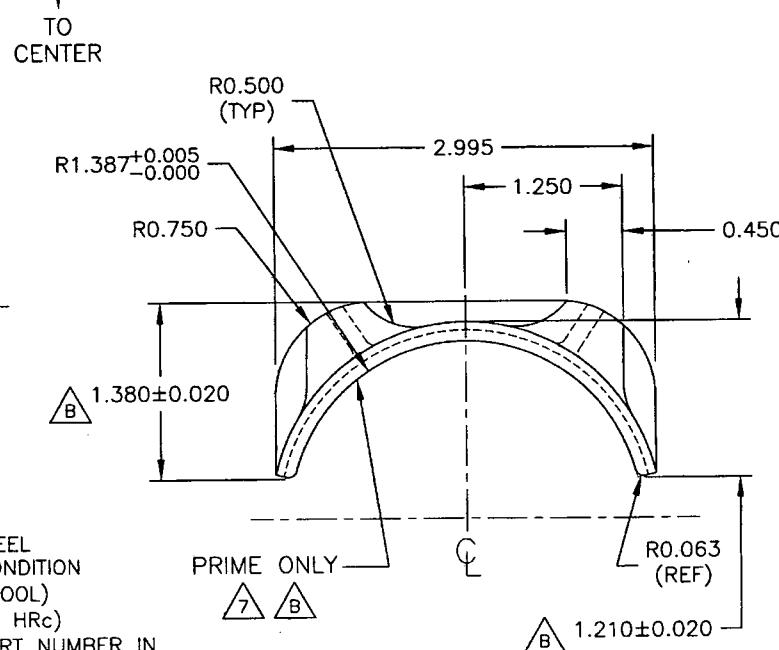
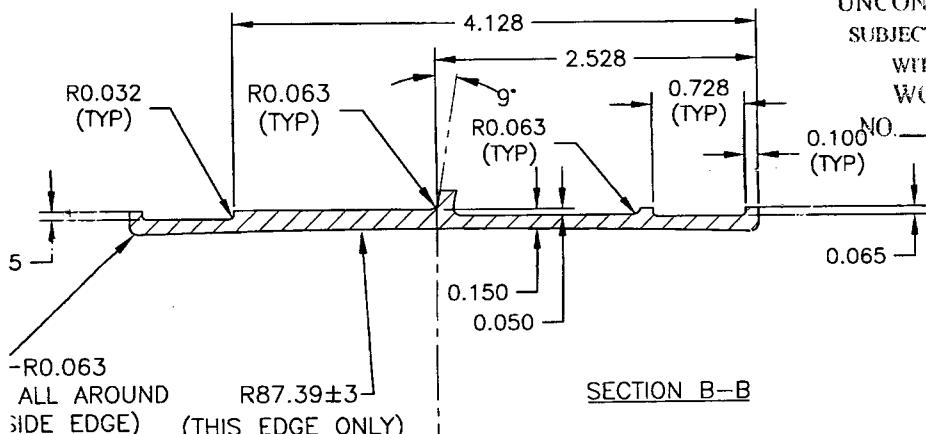
SUBJECT TO AMENDMENT

WITHOUT NOTICE

WORK ORDER NO. 53125

PL 09-10-22

RELEASED  
(07.04.19 AP)  
PER EN 281



93-1

MATERIAL: 17-4 PH STAINLESS STEEL  
HEAT TREAT TO H900 CONDITION  
(900°F FOR 1 HR, AIR COOL)  
MIN UTS = 170 KSI (38 HRC)

IDENTIFY WITH DART LOGO AND PART NUMBER IN  
THIS AREA WITH 0.125 HIGH LETTERING 0.010-0.020 DEEP  
BREAK ALL UNMARKED SHARP EDGES 0.010 TO 0.020

PART IS SYMMETRIC ABOUT CENTERLINE

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

ALL DIMENSIONS ARE IN INCHES

FINISH: POWDER COAT WHITE (REF. 4.3.5.2) PER DART QSI 005 4.3  
PRIME INSIDE SURFACE AS SHOWN PER DART QSI 005 4.2

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PERSON WITHOUT WRITTEN PERMISSION FROM  
DART AEROSPACE LTD.

|         |                                     |                                   |
|---------|-------------------------------------|-----------------------------------|
| B       | 07.03.16                            | UPDATE DIMS AS MFG., PRIME INSIDE |
| A       | 01.01.10                            | NEW ISSUE                         |
| DESIGN  | 97                                  | DRAWN BY                          |
| CHECKED | <input checked="" type="checkbox"/> | APPROVED                          |
| DATE    | 07.03.16                            | TITLE                             |
|         |                                     | Ø2.750 SUPPORT                    |
|         |                                     | SCALE                             |
|         |                                     | 1:1                               |

DART AEROSPACE LTD.  
HAWKESBURY, ONTARIO, CANADA  
REV. B  
DRAWING NO. D2893  
SHEET 1 OF 1